

## DISPOSABLE SLIPPER

### BACKGROUND OF THE INVENTION

#### 1) Field of the Invention

5           The present invention relates to beauty and/or spa products and, in particular, to a disposable slipper that can be worn, for example, in conjunction with a beauty procedure, such as a pedicure.

#### 2) Description of Related Art

10           A pedicure is a typical spa or salon procedure in which the skin on a patron's feet is treated with various moisturizing and exfoliating procedures, often followed by a massage. Typically, the final step in a pedicure is to paint the toenails of the patron's feet with nail polish or lacquer. Often the patron is provided with a pair of disposable foam pedicure slippers, or flip-flops, to wear until the nail polish dries. Each slipper typically has a foam sole and one or more straps that hold the slipper onto the foot. The straps can  
15           have various configurations. For example, a strap formed of a single strip of material can be attached to the left and right side of the slipper so that the strap forms a loop that extends above the slipper and across the width of the slipper. The toes of the patron's foot can be inserted through the loop so that the strap holds the foot between the strap and the sole. Alternatively, two foam straps can form loops that extend upward from the top  
20           of the sole at a position between the patron's toes to a respective side of the slipper. Such slippers are inexpensive and can therefore be used once and then discarded.

            One problem with existing disposable slippers is that the footwear is often offered in only one size for all patrons and therefore rarely provides an exact fit. The slippers can shift around on the patron's feet, particularly when the patron walks, sometimes causing  
25           the straps to touch the wet toenail polish, possibly smudging the polish and requiring repainting. In addition, walking in foam pedicure slippers can be uncomfortable to the patron, especially if the size of the slippers does not closely match the size of the patron's feet.

Thus, there exists a need for improved footwear for use in conjunction with salon and spa procedures such as pedicures. The footwear should not interfere with wet polish that is on the patron's toenails. Preferably, the footwear should be comfortable, even when the patron walks. Further, the footwear should not be expensive to manufacture.

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#### BRIEF SUMMARY OF THE INVENTION

The present invention provides a disposable slipper for adhering to a human foot and protecting the foot. The slipper includes a flexible base layer that can be formed of foam rubber, foam polymers, and the like. The base layer has first and second opposite  
10 sides and a peripheral edge that generally defines an outline of a human foot. A releasable hypoallergenic adhesive is disposed on the first side of the base layer so that the adhesive can be used to adhere the slipper to a bottom of the foot with the second side of the base layer defining a sole directed away from the foot. A releasable backing layer can be disposed on the adhesive opposite the base layer and structured to be removed  
15 from the adhesive so that the backing layer covers the adhesive until the slipper is worn. Slippers according to the present invention can be provided in pairs, each one corresponding to the shape of a right or left foot, respectively.

The present invention also provides a method of making and using a slipper for protecting a foot. The method includes forming a flexible base layer with a peripheral  
20 edge that generally defines an outline of a foot. An adhesive is disposed on the first side of the base layer, which is structured to be pressed against the bottom of the foot so that the slipper is adhered to the foot. A releasable backing layer can be disposed on the adhesive opposite the base layer. The backing layer is structured to be removed before the slipper is worn.

25 The slipper according to the present invention can be used in conjunction with salon and spa procedures such as pedicures. Polish can be applied on toenails of the foot so that the slipper protects the foot while the polish is wet. Thereafter, the base layer is peeled from the foot. The slipper adheres to the bottom of the user's foot and does not interfere with wet polish that is on the user's toenails. Thus, the slipper provides  
30 footwear that can be worn during or after the user's toenails are painted. Further, the footwear is comfortable, even when the patron walks, and is inexpensive to manufacture.

## BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

The foregoing and other advantages and features of the invention, and the manner in which the same are accomplished, will become more readily apparent upon  
5 consideration of the following detail description of the invention taken in conjunction with the accompanying drawings, which illustrate preferred and exemplary embodiments and which are not necessarily drawn to scale, wherein:

Figure 1 is a perspective view illustrating a pair of slippers according to one embodiment of the present invention; and

10 Figure 2 is a section view in elevation illustrating one of the slippers of Figure 1, shown with a releasable backing layer disposed thereon.

## DETAILED DESCRIPTION OF THE INVENTION

The present invention now will be described more fully hereinafter with reference  
15 to the accompanying drawings, in which some, but not all embodiments of the invention are shown. Indeed, this invention may be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided so that this disclosure will satisfy applicable legal requirements. Like numbers refer to like elements throughout.

20 Referring now to the figures and, in particular, Figure 1, there is shown a pair of slippers **10**, each slipper of the pair being individually and collectively referred to herein by the reference numeral **10**. The slippers **10** can be worn by a user during a variety of activities including beauty procedures such as a pedicure at a salon or spa. The slippers **10** can similarly be worn for other purposes, for example, to protect the user's feet in  
25 public or in shared bathing facilities, hospitals, and the like.

The slippers **10** are foot-shaped, i.e., are formed so that the peripheral edge **12** of each slipper **10** corresponds generally to the outline of a human foot. In particular, each slipper **10** extends between a heel portion **14** and a toe portion **16**, and the width of each slipper **10** can vary therebetween according to the typical shape of a foot. Each pair of  
30 slippers **10** includes a left slipper **10a** and a right slipper **10b** that correspond to the respective feet of a user, such as a patron of a beauty salon or spa. The slippers **10** can

define a variety of shapes other than that shown in Figure 1. For example, the toe portion 16 of each slipper 10 can define five elongate portions (not shown) that extend individually from the respective slipper 10 corresponding to the individual toes of the user. Further, the slippers 10 can be manufactured in one or more sizes that correspond approximately to the size of the feet of the users.

Figure 2 illustrates a cross-sectional view of a slipper according to the present invention, such as either of the slippers 10a, 10b of Figure 1. As shown in Figure 2, each slipper 10 is formed of a base layer 18 with an adhesive 20 at least partially disposed thereon. The base layer 18 can be formed of any flexible material that bends to the shape of the bottom of the user's foot and flexes with the user's foot as the user walks. For example, the base layer 18 can be formed of foam rubber, foam polymers, and the like. In particular, the base layer 18 can be a foam formed of blown polyurethane, polyethylene, polypropylene, polystyrene, or other blown polymers.

Each base layer 18 defines first and second sides 22, 24. The adhesive 20, which is at least partially disposed on the first side 22 of each base layer 18, adheres each slipper 10 to one of the feet of the user so that the second side 24 of the slipper 10 is directed away from the foot and defines a sole that contacts a floor surface when the user stands or walks, thereby protecting the user's foot. Thus, the slipper 10 provides a barrier or protective shield between the user's foot and the floor surface. By preventing contact between the user's foot and the floor surface, the slipper 10 helps to prevent the transfer of debris, germs, water, or other substances between the floor surface and the user's foot, thereby keeping the user's foot clean. Further, the base layer 18 can provide padding that increases the comfort of the user's feet when standing or walking in the slippers 10. The base layer 18 can have any desired thickness, but preferably has a thickness of between about 0.05 inch and about 1 inch.

The adhesive 20 can be disposed on the entire area of the first side 22 of each base layer 18 or on only part of the first side 22 of each base layer 18. For example, the adhesive 20 can be disposed randomly or in a predetermined pattern of lines, dots, or other shapes. In one embodiment (not shown), the adhesive 20 is disposed generally where the first side 22 of the base layer 18 will contact the foot of the user, i.e., where the first side 22 would contact the heel, ball, and toes of the foot but not where the first side

**22** would be directed toward the arch of the foot. The adhesive **20** provides sufficient adhesion between the slipper **10** and the foot to hold the slipper **10** against the foot.

Straps are not required for retaining the slippers **10** on the feet, and the lack of straps reduces the likelihood that the slippers **10** will interfere with the tops of the user's feet.

5 Thus, the slippers **10** can be worn during or after a pedicure in which the user's toenails are painted and pose little risk of smudging or otherwise interfering with the wet paint on the user's toenails.

Preferably, the adhesive **20** is hypoallergenic, i.e., is unlikely to cause an allergic reaction in the user. Such adhesives include Avery Dennison™ MED8311 and 3M™  
10 1772, each available from the respective manufacture. The adhesive **20** can be provided as a fluid adhesive or an adhesive film. The adhesive **20** preferably provides a sufficiently strong bond between the slipper **10** and the foot so that the user can walk without the slipper **10** becoming detached. However, the bond between the adhesive **20** and the user's foot is not so strong that the user cannot overcome the bond to remove the  
15 slipper **10** from the foot. For example, the user should be able to grasp an edge of the slipper **10** and peel the slipper **10** from the foot. In some embodiments, the adhesive **20** can be sensitive to and activated by pressure and/or heat so that the weight of the user's body and/or the thermal energy from the user's foot causes the adhesive to bond the slipper **10** thereto. In addition, the adhesive can include a moisturizer, fragrance,  
20 antibacterial substance, or other substances for increasing the comfort, aesthetic appeal, or hygienic properties of the slipper **10**.

As shown in Figure 2, a releasable backing layer **28** can be disposed on the adhesive **20** of the slipper **10** opposite the base layer **18** so that the adhesive **20** is shielded from the ambient environment by the releasable backing layer **28** until the  
25 backing layer **28** is removed and the slipper **10** is worn. The releasable backing layer **28** can be a laminar film formed of a polymer such as polyethylene (PE) or polyester (PET). Alternatively, the backing layer **28** can be a paper layer. In any case, the backing layer **28** can be coated with a release material, such as silicone, to facilitate the removal of the backing layer **28** from the adhesive **20**.

The base layer **18**, adhesive **20**, and backing layer **28** can be obtained as a pre-manufactured product such as 3M™ White 1/16 inch Polyethylene Foam Tape 1772, 83# Liner.

5 The operations for making and using a temporary-use, disposable slipper according to one embodiment of the present invention will now be described. It is understood that one or more of the operations can be omitted and additional operations can be included without departing from the scope of the present invention. The flexible base layer **18** is provided, and the adhesive **20** is disposed on the first side **22** of the base layer **18**. For example, the adhesive **20** can be disposed by rolling, brushing, or spraying  
10 the adhesive **20** onto the base layer **18**, which can be foam rubber or blown polymer. The adhesive **20** and/or the base layer **18** can be electrostatically charged so that the adhesive is deposited evenly on the base layer **18**. Alternatively, the adhesive **20** can be disposed as a film onto the base layer **18**. The releasable backing layer **28** can be disposed over the adhesive **20**, opposite the base layer **18**. The sheet of the base layer **18** is then cut into  
15 one or more foot-shaped portions, for example, using a die. Alternatively, the foot-shaped portions can be cut before the adhesive is applied. In some embodiments, a single shape that is cut from the base layer **18** can be used to form either of the left or right slipper **10**, depending on the side **22**, **24** to which the adhesive **20** is applied. The slippers **10** can then be packaged in pairs in a container such as a paper or plastic bag or the like  
20 for use in a salon or spa in conjunction with pedicure procedures. In another embodiment, the user of the slipper **10** or an employee of the salon where the slippers **10** are used could cut or otherwise shape the slipper **10** after removing the slipper **10** from its package.

In use, the releasable backing layer **28** is peeled from the adhesive **20**, exposing  
25 the adhesive **20** as shown in Figure 1, and the adhesive **20** and first side **22** of the base layer **18** are pressed against the bottom of the foot so that the base layer **18** is adhered thereto. Polish, i.e., paint or other lacquer, can be applied on the toenails of the foot before or after the slipper **10** is adhered so that the slipper **10** provides a protective barrier to the bottom of the foot while the polish is wet. When the polish is dry, the slipper **10**  
30 can then be peeled from the foot and discarded.

Many modifications and other embodiments of the invention set forth herein will come to mind to one skilled in the art to which this invention pertains having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Therefore, it is to be understood that the invention is not to be limited to the specific  
5      embodiments disclosed and that modifications and other embodiments are intended to be included within the scope of the appended claims. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation.